DOLGOPOL'SKAYA, M.A.; AKSEL'BAND, A.M.

Effect of ultrasonic oscillations on the organisms of marine fouling and the process of fouling. Trudy SBS 17:309-324 '64. (MIRA 18:6)

AKSEL'BAND, A.M., dotsent, nauchnyy sotrudnik; KRAVCHENKO, N.A., inzh., nauchnyy sotrudnik; ASNER, B.G., rabotnik

Reducing the static electricity buildup of yarn made from rayon and synthetic fibers. Tekst. prom. 24 no.4:70-72 Ap '64. (MIRA 17:6)

1. Odesskiy institut inzhenerov Morskogo flota (OIIMF) (for Aksel'band, Kravchenko). 2. Odesskaya trikotazhnaya fabrika imeni N.K. Krupskoy (for Asner).

HKSEL ORUD, G. A.

USSR/ Physics - Dynamics

Card 1/1 Pub. 147 - 3/25

Authors : [illegible]

Title : [illegible]

Periodical : Zhur. fiz. khim. 28/10, 1725-1734, Oct 1954

Abstract : [illegible]

[illegible] of the HKSEL results in the movement of the part [illegible]

Institution : [illegible]

Submitted : [illegible]

AKSEL'DORF, A.L.

Case of bilateral disgerminoma of the ovary in bilateral inguinal hernia. Vop. onk. 6 no. 8:88-89 Ag '60. (MIRA 14:1)
(OVARIES—TUMORS) (HERNIA)

AKSEL'DORF, A.L.

Inflammatory tumor of the omentum at the site of a foreign body which has perforated the intestine. Kaz. med. zhur. no.6:60-61 N-D '61. (MIRA 15:2)

1. Kuybyshevskaya gorodskaya tsentral'naya bol'nitsa imeni N.I. Pirogova (glavnyy vrach - K.P.Zhil'tsova).
(OMENTUM--TUMORS)

AKSEL'DORF, A. L.; ORKIN, Ye. A.

Prolapse of a fibromyxoma of the urinary bladder from the urinary canal in a 1-year-old child. Urologiia no.2:61-62 '62.
(MIRA 15:4)

1. Iz urologicheskogo otdeleniya Kuybyshevskoy tsentral'noy gorodskoy bol'nitsy imeni N. I. Pirogova.

(BLADDER—TUMORS)

AKSEL'DORF A.L.; GOLOVASTIKOVA, K.V.

Chyluria and pyelolymphatic reflux. Urologiia no.6:56-58'62. (MIRA 16:7)

1. Iz urologicheskogo otdeleniya (konsul'tant - dotsent V.P. Smelovskiy) Kuybyshevskoy gorodskoy tsentral'noy bol'nitsy imeni N.I.Pirogova.

(CHYLE) (URINE—ANALYSIS AND PATHOLOGY)
(LYMPHATICS—DISEASES)

AKSEL'DORF, A.L. (Kuybyshev (obl), ul. Nekrasova, 21, kv.2)

Epididymal fibroma. Vop. onk. 9 no.7:99-101 '63 (MIRA 16:12)

1. Iz rozhdestvenskoy uchastkovoy bol'nitsy Kuybyshevskoy oblasti.

AKSEL'DORF, A.L.

Diagnosis of ureteral ectopia. Urologiia no.4:54-55 '64.
(MIRA 19:1)

1. Urologicheskaya klinika (zav. - prof. I.M. Epshteyn) I Moskovskogo ordena Lenina meditsinskogo instituta imeni Sechenova.

AKSEL'DORF, A.J.

Rudimentary kidney. Urol. i nefr. 30 no.1:52-54 Ja-F '65.
(MIRA 18:11)

1. Kafedra urologii (zav. - prof. I.M.Epshteyn) 1 Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.Sechenova.

AKSEL'DORF, A.L.; GLEYZER, Yu.Ya.

Radioisotopic renography in the diagnosis of a "silent" kidney.
Sov. med. 28 no.8:52-56 Ag '65. (MIRA 18:9)

1. Urologicheskaya klinika (zav. - prof. I.M.Epshteyn) i biofizicheskaya laboratoriya (zav. - doktor med. nauk V.G. Spesivtseva) fakul'tetskoy terapevticheskoy kliniki I Moskovskogo ordena Lenina meditsinskogo instituta imeni Sechenova.

EPSHTEYN, I.M., prof.; SPESIVTSEVA, V.G.; GLEYZER, Yu.Ya.; AKSEL'DORF, A.L.

Isotope renography in urological practice. Med. rad. 10 no.11: 45-54 N '65. (MIRA 19:1)

1. Urologicheskaya klinika (zav. - prof. I.M. Epshteyn) i klinika fakul'tetskoy terapii (zav. - prof. Z.A. Bondar') I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova. Submitted November 11, 1964.

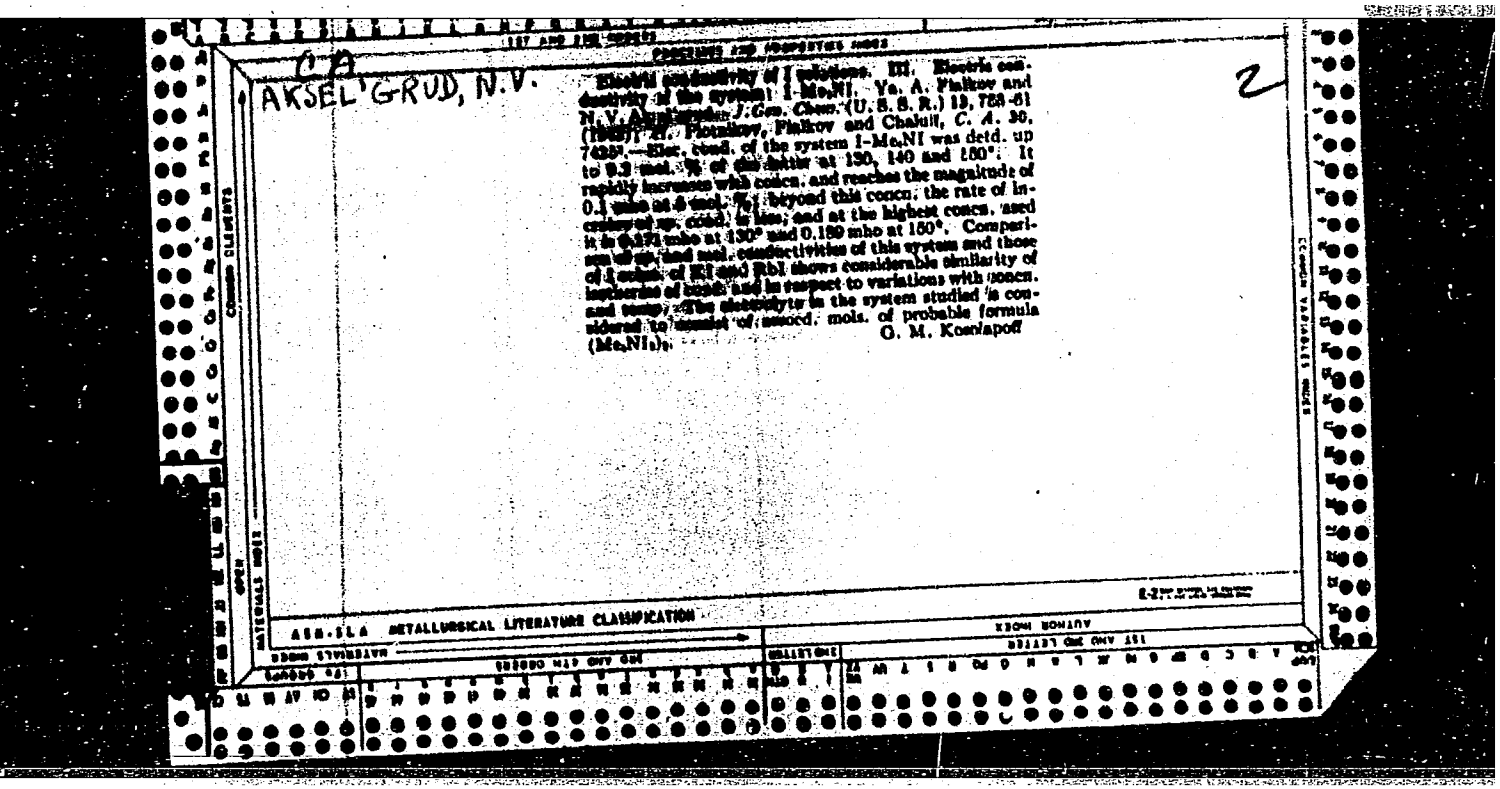
VEL'TMAN, R.P.; ZHUKOVSKIY, L.I.; PONOMAREV, L.Ye.; VEMYAN, A.Zh.; BENENSON, M.P.; ZALMANENOK, V.S.; KRUPENKO, T.I.; BABICH, Z.Ye.; GUTMAN, L.B.; ALIMOV, T.U.; YAKUNIN, P.N.; KRYZHANOVSKAYA, N.L.; AKSEL'DORF, A.L.; MUSINA, S.A.; KLEYF, A.D.; LUTSEVICH, E.V.; LEVINSON, O.S.; TURBINA, N.S.

Brief reports. Sov. med. 28 no.10:144-148 O '65.
(MIRA 18:11)

1. Kiyevskiy institut tuberkuleza i grudnoy khirurgii (for Vel'tman, Zhukovskiy). 2. 3-ya kafedra khirurgii TSentral'nogo instituta usovershenstvovaniya vrachey, Moskva (for Ponomarev, Vemyan, Benenson). 3. Kafedra propedevticheskoy terapii Grodnenskogo meditsinskogo instituta i 1-ya klinicheskaya bol'nitsa imeni Solov'yeva, Grodno (for Zalmanenok, Krupenko). 4. Ukrainskiy nauchno-issledovatel'skiy institut okhrany materinstva i detstva imeni Buyko, Kiyev (for Babich, Gutman). 5. Klinika gospital'noy khirurgii Andizhanskogo meditsinskogo instituta (for Alimov). 6. Kafedra voyenno-polevoy terapii Voyenno-meditsinskoy ordena Lenina akademii imeni Kirova, Leningrad (for Mitropol'skiy, Latysh, Murchakova). 7. Kafedra urologii I Moskovskogo ordena Lenina meditsinskogo instituta (for Aksel'dorf). 8. 4-ya infektsionnaya klinicheskaya bol'nitsa Ufy (for Musina). 9. Chernovitskaya detskaya oblastnaya klinicheskaya bol'nitsa (for Kleyf). 10. Klinika obshchey khirurgii lechebnogo fakul'teta I Moskovskogo meditsinskogo instituta imeni Sechenova i patologoanatomicheskoye otdeleniye klinicheskoy bol'nitsy No.23 imeni Medsantrud, Moskva (for Lutsevich, Levinson). (Cont. next card)

VEL'TMAN, R.P.; (Continued) Card 2:

11. Gematologicheskaya klinika TSentral'nogo ordena Lenina instituta gematologii i perelivaniya krovi, Moskva (for Turbina).



MARANTS, A.G.; ZEGZHD, V.P.; TIKHONOVA, L.A.; SOKOLOV, V.I.; RYBNIKOV, V.A. [deceased]; DEREVYANCHENKO, L.D.; KARKLIT, A.K.; AKSEL'RAD, E.A.; SARMIN, A.P.; FEL'DGANDLER, G.G., red.; MAKSIMOV, Ye.I., red. izd-va KARASEV, A.E., tekhn. red.

[Handbook of refractory materials, products, and raw materials; compiled accoridng to state standards and technical specifications] Spravochnik na ogneupornye izdeliia, materialy i syr'e. Sostavlen po gosudarstvennym standartam i tekhnicheskim usloviiam. Izd.2., ispr. i dop.. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1961. 338 p. (MIRA 14:9)

1. Sotrudniki Vsesoyuznogo instituta ogneuporov (for all except Fel'dgandler, Maksimov, Karasev).
(Refractory materials—Standards)

AKSEL'RAD, E.A. 4

PHASE I BOOK EXPLOITATION SOV/5865

Zegzhda, V. P., L. A. Tikhonova, V. I. Sokolov, A. G. Marants, V. A. Rybnikov [deceased], L. D. Derevyanchenko, A. K. Karklit, E. A. Aksel'rad, and A. P. Sarmin

Spravochnik na ogneupornyye izdeliya, materialy i syr'ye. Sostavlen po gosudarstvennym standartam i tekhnicheskim usloviyam (Handbook of Refractory Products, Materials and Raw Materials. Compiled According to State Standards and Technical Specifications) 2d ed. rev. and enl. Moscow, Metallurgizdat, 1961. 338 p. Errata slip inserted. 12,500 copies printed.

Supervisor: A. G. Marants; Ed.: G. G. Fel'dgandler; Ed. of Publishing House: Ye. I. Maksimov; Tech. Ed.: A. I. Karasev.

PURPOSE: This manual is intended for technical personnel working in ferrous and nonferrous industries and in other branches of industry and construction, for planners, designers, and personnel of technical supply administrations.

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and for specialists in refractory manufacture and application.

COVERAGE: The manual deals with State standards and technical specifications for refractory ware, materials, and stock used in the construction and repair of furnaces used for smelting, heating, calcination, and distillation, and of fire chambers for boilers and dryers. The specifications also cover other thermal units used for processing under high thermal conditions, but do not include all refractory materials since approximately 10% of them have never been standardized. This edition has been enlarged by the inclusion of data on cast refractories and carbonaceous ware, as well as additional data on refractory stock, magnesite ware, forsterite ware, and metallurgical filler powders. The lists included in the manual contain State standards and specifications approved as late as Mar 1960. No personalities are mentioned. There are no references.

TABLE OF CONTENTS [Abridged]:

AVAILABLE: Library of Congress (TN677.S67)

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L 13359-63 EWP(q)/EWT(m)/BDS AFFTC/ASD JD/JG
ACCESSION NR: AT3002323 S/2928/62/000/003/0003/0028

AUTHOR: Aksel'rad N. V. 56

TITLE: Composition and various properties of basic chlorides and hydroxides of rare-earth elements 27

SOURCE: AN UkrRSR. Institytut zahal'noyi ta neorhanichnoyi khimiyi. Raboty po khimii rastvorov i kompleksnykh soyedineniy, no. 3, 1962. Khimiya rastvorov redkozemel'nykh elementov, 3-28.

TOPIC TAGS: rare-earth element, hydroxide, basic chloride, activity product, isobaric potential, quasi-equilibrium system

ABSTRACT: The rare-earth element (REE) hydroxides and basic chlorides were investigated with respect to their composition, method of preparation and properties.

1. Composition of basic chlorides. They have the general formula $M(OH)_3Cl$ and $M(OH)_{2.5}Cl_{0.5}$. $Ce(OH)_{2.33}Cl_{0.67}$ and $Pr(OH)_{2.66}Cl_{0.34}$ are also known. Decrease in activity of metal ion and aging cause formation of more basic salt, i.e., salt approaching $M(OH)_3$.

2. pH of precipitation of basic chlorides and hydroxides. pH of

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the heterogeneous systems M^{n+}-OH^--Cl^--H_2O was established; its dependence on nature of the ions, their activity, concentration and condition of solutions and precipitates is discussed.

3. Activity products and isobaric potentials of REE basic chlorides and hydroxides. Original and literature data are summarized. Dependence of activity product on concentration and activity of ions in quasi-equilibrium systems. The greater the concentration the greater the recrystallization, the activity product is lowered and isobaric potential increased.

Changing π_a of basic salts and hydroxides in the aging process: activity product decreases with aging.

Dependence of π_a and ΔZ^o of REE basic chlorides and hydroxides on periodic number: ΔZ^o generally decreases; lg π_a generally increases with atomic number in the scandium and lantanoid subgroups. The second periodicity in the lantanoid group is discussed.

4. Basic properties of REE hydroxides. REE are the most basic of all trivalent elements although some, e.g. scandium, also show acidic properties. With increase in atomic number the pH_o of the basic chlorides and hydroxides decreases. The various positions of the central elements of the REE series, especially Y, in the alkalinity

SOV/124-58-11-13027

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 11, p 167 (USSR)

AUTHOR: Aksel'rad, E. L.

TITLE: A Method for Computation of Shells With Nonhomogeneous Thermoelastic Properties and Application of This Method to Bimetallic Elements Employed in Instruments (Raschet neodnorodnykh po termouprugim svoystvam obolochek i yego primeneniye k bimetallicheskim elementam priborov)

PERIODICAL: Tr. Leningr. in-t aviats. priborostr., 1957, Nr 24, pp 41-96

ABSTRACT: The method presented takes into account the appearance of thermal stresses and permits computation of bimetallic elements having the shape of strips or surfaces of revolution. In the beginning of the article, the author reduces the general problem on the deformation of a shell with varying elastic constants, with due allowances for the effects of temperature, to the problem of the deformation of a homogeneous and uniformly heated shell which is subjected to a certain load. The second part of the article is devoted to the solution of specific problems dealing with the determination of stresses and strains in bimetallic shells and plates. The computations are

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A Method for Computation of Shells With Nonhomogeneous Thermo-elastic (cont.) SOV/124-58-11-13027

substantiated by experimental data.

Ye. F. Burmistrov

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SOV/124-58-8-9329 D

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 8, p 136 (USSR)

AUTHOR: Aksel'rad, E.L.

TITLE: The Calculation of Thermoelastically Nonhomogeneous Shells and Its Application to Bimetallic Instrument Parts (Raschet neodnorodnykh po termouprugim svoystvam obolochek i yego primeneniye k bimetallicheskim elementam priborov)

ABSTRACT: Bibliographic entry on the author's dissertation for the degree of Candidate of Technical Sciences, presented to the Leningr. in-t aviats. priborostr. (Leningrad Institute of Aircraft-instrument Construction), Leningrad, 1958

ASSOCIATION: Leningr. in-t aviats. priborostr. (Leningrad Institute of Aircraft-instrument Construction), Leningrad

Card 1/1

AKSEL'RAD, E.L.

Deformation of a cantilever bimetallic plate subjected to heating. Izv. vys. ucheb. zav.; prib. no.4:108-116 '58.
(MIRA 12:7)

1. Vsesoyuznyy zaochnyy lesotekhnicheskiy institut.
(Elastic plates and shells)

AUTHOR: Aksel'rad, E.L. (Leningrad) SOV/24-58-6-11/35

TITLE: On the Theory of Inhomogeneous Isotropic Shells (K teorii neodnorodnykh izotropnykh obolochek)

PERIODICAL: Izvestiya Akademii Nauk SSSR Otdeleniye Tekhnicheskikh Nauk, 1958, Nr 6, pp 73-76 (USSR)

ABSTRACT: It is shown that the theory of homogeneous shells can be applied to shells having an arbitrary variation of the modulus of elasticity through their thickness (for bimetallic shells the problem has been solved in Ref 2). The thickness of the shell is assumed constant and small. The material of the shell follows Hook's law for elastic constants which vary through the volume. The displacements and deformations in an inhomogeneous shell are defined by displacements and deformations of some initial surface just as for homogeneous shells these quantities are defined by the deformations and displacements of the mean surface. Expressions for the deformations of the initial surface of the inhomogeneous shell coincide with the corresponding expressions for the homogeneous shell.

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SOV/24-58-6-11/35

On the Theory of Inhomogeneous Isotropic Shells

The equilibrium equations for the element of the shell are identical in form with the corresponding equations in the theory of homogeneous shells. The position of the initial surface is determined so that the potential energy is obtained in a simple form which is similar to that for a homogeneous shell.

There are 1 figure and 7 Soviet references

SUBMITTED: March 10, 1956

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AUTHOR: Aksel'rad, E. L. (Leningrad) SOV/24-58-8-8/37

TITLE: On Temperature Deformations in Non-uniform Shells (O temperaturnykh deformatsiyakh neodnorodnykh obolochek)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1958, Nr 8, pp 48-52 (USSR)

ABSTRACT: The author determines the load causing the same deformation as a given variation of the temperature for a shell with elastic properties and the temperature distribution coefficient arbitrarily variable (in volume). Since the problem of the deformation by an external load of a shell with non-uniform elastic properties through its thickness leads to the corresponding problem of a uniform shell (Ref 1), the temperature problem for a shell which is non-uniform through its thickness leads to the static problem for a uniform shell. The important practical case is considered when:

$$P = \frac{\beta E t}{1 - 2\nu} = P(z)$$

where β is the coefficient of linear expansion,
E is Young's modulus,

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t is the temperature,
ν is Poisson's coefficient and
z is normal to the surface.

It is thus shown that if the temperature expansion and the elastic properties of the material vary only through the thickness of the shell, then, under the influence of the temperature variation, the shell has uniform expansion defined by the equation

$$\frac{1 - \nu_c}{E_c h} T_p = \text{const}$$

where ν_c, E_c are the Poisson coefficient and the modulus of elasticity for the shell in tension and compression, and

$$T_p = \int_{z_-}^{z_+} p\,dz \quad , \quad p = \beta E t/(1 - \nu)$$

Card 2/3 on which is imposed a deformation due to the action of a

On Temperature Deformations in Non-uniform Shells SOV/24-58-8-8/37

moment M_p applied at the free boundary of the shell and to the supporting reactions. It is important that the above is true for a shell of any shape and for the case when the displacements due to external loads and temperature variations are not small.
There are 2 figures and 6 Soviet references.

SUBMITTED: March 10, 1957

1. Elastic shells--Deformation 2. Elastic shells--Temperature factors 3. Elastic shells--Mathematical analysis

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AKSEL'RAD, E. L., Candidate Tech Sci (diss) -- "Some problems in the theory of membranes with heterogeneous thermoelastic properties ". Leningrad, 1959. 15 pp (Min Higher Educ USSR, Leningrad Polytech Inst im M. I. Kalinin), 150 copies (KL, No 26, 1959, 124)

SOV/179-59-1-25/36

AUTHOR: Aksel'rad, E. L. (Leningrad)

TITLE: Bending of Thin-Walled Beams with Open Sloping Profiles Under Large Elastic Displacements (Izgib tonkostennykh sterzhney s razomknutym pologim profilem pri bol'shikh uprugikh peremeshcheniyakh)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Mekhanika i mashinostroyeniye, 1959, Nr 1, pp 150-153 (USSR)

ABSTRACT: The paper is a continuation of earlier work (Ref.3). The beam is end-loaded, and there is a temperature gradient through the thickness of the wall. If the elastic properties vary through the thickness of the wall, it is necessary to use the effective Young's moduli and Poisson's ratios in tension (E', ν') and in bending (E", ν'') (Ref.3). The radial displacements and the bending moment caused by the temperature gradient are determined mathematically and the deflections of beams with different profiles are shown graphically. The stability of a beam under a bending moment at its end is

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Bending of Thin-Walled Beams with Open Sloping Profiles Under Large Elastic Displacements

also discussed. The results are applied to determining the thermal deformation of bimetallic strips and spirals. There are 3 figures and 7 references, 2 English, 4 Soviet and 1 German.

SUBMITTED: April 14, 1958.

SOV/122-59-2-3/34

AUTHOR: Aksel'rad, E.L., Engineer

TITLE: Contribution to the Problem of the Design Analysis of the Geneva Mechanism (K voprosu rascheta mekhanizma mal'tiyskogo kresta)

PERIODICAL: Vestnik Mashinostroyeniya, 1959, Nr 2, pp 11-14 (USSR)

ABSTRACT: In the practice of machine tool applications of geneva mechanisms, the case of locking due to delayed withdrawal of a tool, the sticking of the workpiece in loading or unloading or the accidental presence of other objects must be considered. Previous stress analysis was based on the resistance loads in normal operation. The present paper deals with the stressing of geneva mechanisms in the case of wedging. The analysis leads to a formula (Eq 5) for the ratio of the geneva cam torque and the driving arm torque. This formula contains the actual clearances between the roller and the slot. A simplified formula (Eq 5') can be used in most instances. Numerical examples are given. It follows that the wedging case needs a special stress check and may call for a load limiting device or a strength based on the

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Contribution to the Problem of the Design Analysis of the Geneva Mechanism

maximum driving torque. There are 3 figures and 2 Soviet references.

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AKSEL'ROD, E.L. (Leningrad)

Bending of thin-walled rods having an open flat profile at high elastic displacements. Izv.AN SSSR.Otd.tekh.nauk.Mekh. i mashinostr. no.2:150-153 Ja-F '59. (MIRA 12:5)
(Elastic rods and wires)

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SOV/179-59-5-37/41

AUTHOR: Aksel'rad, E.L. (Leningrad)

TITLE: Small Deflections of an Isotropic Plate Having Inhomogeneous Thermal Properties

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Mekhanika i mashinostroyeniye, 1959, Nr 5, pp 176-177 (USSR)

ABSTRACT: The paper is a continuation of previous work (Ref 3). The deflection is discussed of a thin plate in which the elastic properties vary through the thickness, for example a bimetal. Using the previous results of the author and other workers, the governing differential equation is derived and solved for a plate with free edges. The equation appropriate to clamped and supported edges is also given. There are 4 Soviet references.

SUBMITTED: October 13, 1958

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24(8)

AUTHOR: Aksel'rad, E. L., Engineer

SOV/119-59-9-4/19

TITLE: The Exact Calculation of the Deformation of Thermobimetallic Strips and Spirals

PERIODICAL: Priborostroyeniye, 1959, Nr 9, pp 11-14 (USSR)

ABSTRACT: According to the opinion of the author, the formula for the deformation of bimetals generally used in publications deviates considerably from experimental data. This is generally known, but no explanation has been found hitherto. The formula in question has the following form: $\frac{1}{R} - \frac{1}{R_0} = \frac{3}{2} \frac{\beta_1 - \beta_2}{hK_{mn}} t$, where $K_{mn} = 1 + \frac{(1-mn^2)^2}{4\,mn(1+m)^2}$, and $\frac{1}{R} - \frac{1}{R_0}$ denotes the curvature of the strip, $\beta_1 - \beta_2$ the coefficients of the linear thermal expansion of the bimetal strips, t the change in temperature, $m = h_2/h_1$, $n = E_2/E_1$, the ratios of the thickness and of the modules of

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The Exact Calculation of the Deformation of Thermobimetallic Strips and Spirals

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elasticity of the bimetal layers, h the thickness of the strip, and b the width of the strip. The reason for the discrepancy between experiment and formula is to be sought, according to the author, solely in the variable values of the quantities m, n, $\beta_1 - \beta_2$ for bimetal strips of one and the same make. In the author's opinion the above formula does not take into account the influence of shape, width, and fixing method of the strip ends on the amount of the deformation of the strip. Thanks to the development of the theory of shells consisting of 2 layers in the papers of Soviet scientists, especially by the Corresponding Member of the AS USSR E. I. Grigolyuk it was possible to define and solve some of the main problems of bimetal strips of finite width. The author then reports on the causes for the deviation of the curving of real strips from that of a narrow strip (which is described by the above formula). Formulas and diagrams are given for the calculation, without derivations. The author calculates the deflection and torsion angle at the end of a thermobimetal plate only fixed at one side with a variation in temperature. Under certain circumstances a broad strip is deflected more than a narrow one. The reasons for this phenomenon

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are given. A strip which cannot alter the form of its cross section, is subject to an additional elongation of the layers compared with narrow strips, which additionally increases the longitudinal curving (by the $1 + \mu$ fold amount). Formulas for the correction of the influence of the attachment on the deflection are given. The variation in form of the transversal cross section of a wide curved strip is limited by the longitudinal strain occurring in the strip. The transversal transformations are all the slighter, and the longitudinal curving of a long strip therefore all the greater, the broader the strip and the more curved it is. A numerical example is computed. In a paper by A. I. Vorob'yev, and O. G. Katsnel'son it was also shown that a plane plate of arbitrary form is curved similarly in all directions when heated. There are 7 figures, 1 table, and 5 references, 4 of which are Soviet.

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24.4100 also 2308

AUTHOR: Aksel'rad, E.L. (Leningrad)

TITLE: The Deformation Equations of a Shell of Rotation and the Bending of Thin-walled Columns for Large Elastic Displacements

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Mekhanika i mashinostroyeniye, 1960, No 4, pp 84-92

TEXT: A.I. Lur'ye's equations are generalised for large elastic displacements of an anisotropic inhomogeneous shell. It is assumed that the deformation, elongation and displacement are small compared to unity. The well-known system of equations for large deflections of curved shells of rotation is derived. In the case of small displacements the results improve on the equations of Clark et al. (Refs 3-5) and in the case of large displacements of a shell of rotation they improve the equations of E. Reissner (Ref 9). Consider a thin-walled shell of rotation, in general not passing through the axis, and occupying a certain segment between two meridional planes. It is assumed that the loading (and temperature variation) is such that all meridional sections are deformed alike,

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The Deformation Equations of a Shell of Rotation and the Bending of Thin-walled Columns for Large Elastic Displacements

and remain planes. Cylindrical coordinates r(s), z(s) (where s measures the distance from an origin on the reference meridian plane to the point of interest) are introduced. In deformation the shell is treated as a bending column. The parameters ε_1, ε_2, $\varkappa_1$ and $\varkappa_2$ of the deformation of the reference plane are defined and the equation of compatibility between deformation and displacement derived. Further equations are obtained by using the equations of elasticity which take into account the possibility of a definite anisotropy and inhomogeneity along the meridian and through the thickness. Two basic equations are now derived, the first coming from Lur'ye's equilibrium equations for an element of the shell, together with some of the relations described above, and the second coming from the elimination of the internal moments M_1 and M_2 from the equation of equilibrium of an element of the shell. These non-linear equations contain transcendental functions which can only be removed if restrictions are laid on the angle of rotation θ. The relation of the simplified equations to other cases in the literature is considered. Even the simplified equations are

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10.9100

S/179/60/000/006/029/036
E081/E135

AUTHOR: Aksel'rad, E.L., (Leningrad)

TITLE: Deformation of Shells with Variable Thermal Expansion Through the Thickness

PERIODICAL: Izvestiya Akademii nauk SSSR,Otdeleniye tekhnicheskikh nauk, Mekhanika i mashinostroyeniye, 1960, No. 6, pp 158-160

TEXT: The paper is a continuation of previous work (Refs 1,3). The deformation is analysed by introducing an orthogonal system of coordinates α_1, α_2 and α_3; α_1 and α_2 coincide with the lines of curvature of the initial surface, whereas α_3 ($\equiv z$) is directed along the external normal. The elastic constants and thermal expansion are assumed to be functions of z only, so that the expansion is given by :

$$\beta t = f(z) \qquad (1.1)$$

The thermal deformation is calculated from the action of a "thermal" loading made up of: 1) a normal pressure given by

Deformation of Shells with Variable Thermal Expansion Through the Thickness

$$Z_t = T_t \left(\frac{1}{R_1} + \frac{1}{R_2} \right), \qquad T_t = \int_{z_-}^{z_+} \frac{\beta t E}{1 - \nu} \, dz \qquad (2.1)$$

2) a force normal to the edge contour equal to T_t; 3) a bending moment:

$$M_t = \int_{z_-}^{z_+} \beta t \frac{E}{1 - \nu} z dz \qquad (2.2)$$

applied to all edges, where R_1, R_2 are the principal radii of curvature of the deformed initial surface, z_- and z_+ are the coordinates of the internal and external surfaces of the shell. The equilibrium of a shell under the action of an arbitrary load and the thermal loading given by (2.1), (2.2) and by the static boundary conditions can be expressed, according to V.V.Novozhilov (Ref.2) by Eq.(3.1), provided the extension and shear are small compared with unity.

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Deformation of Shells with Variable Thermal Expansion Through the Thickness

$$\frac{1}{A_1A_2}\left\{\frac{\partial A_2T_1^\circ}{\partial\alpha_1}+\frac{\partial A_2T_{21}^\circ}{\partial\alpha_2}+\frac{\partial A_1}{\partial\alpha_2}T_{12}^\circ-\frac{\partial A_2}{\partial\alpha_1}T_2^\circ\right\}+\frac{T_{12}^\circ}{R_1}+X_1=0 \quad (1\rightleftarrows 2)$$

$$\frac{1}{A_1A_2}\left[\frac{\partial A_2T_{12}^\circ}{\partial\alpha_1}+\frac{\partial A_1T_{22}^\circ}{\partial\alpha_2}\right]-\frac{T_1^\circ}{R_1}-\frac{T_2^\circ}{R_2}+Z^\circ=0 \qquad (3.1)$$

$$\frac{1}{A_1A_2}\left\{\frac{\partial A_2M_1^\circ}{\partial\alpha_1}+\frac{\partial A_1M_{21}^\circ}{\partial\alpha_2}+\frac{\partial A_1}{\partial\alpha_2}M_{12}^\circ-\frac{\partial A_2}{\partial\alpha_1}M_2^\circ\right\}-T_{12}^\circ=0 \quad (1\rightleftarrows 2) \qquad (3.1)$$

$$T_{12}^\circ-T_{21}^\circ+\frac{M_{12}^\circ}{R_1}-\frac{M_{21}^\circ}{R_2}=0$$

In this equation A_1, A_2 are the Lamé parameters; Z^0, X_1 and X_2 are components per unit area of the force and thermal loadings distributed over the initial surface; T_{ij}^0, M_{ij}^0 are the fictitious forces and moments arising in the section of the shell from the combination of the force and thermal loadings. The author has shown (Ref.1) that the deformation of any shell having thermal expansion, and in the general case, elastic

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Deformation of Shells with Variable Thermal Expansion Through the Thickness

properties, varying through the thickness can be determined by adding uniform volume expansion to the deformation caused by the reaction of the supports, and applying a "thermal" bending moment to all edges of the shell. The solutions of (3.1) are analysed and it is shown that the concept is also justified for large elastic displacements and for shells in which not only elastic modulus, but also Poisson's ratio, are both variable through the thickness.
There are 4 Soviet references.

SUBMITTED: December 10, 1959

Card 4/4

24548

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10.7000

S/179/61/000/002/016/017
E081/E141

AUTHOR: Aksel'rad, E.L. (Leningrad)

TITLE: The theory of inhomogeneous anisotropic shells

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Mekhanika i mashinostroyeniye, 1961, No.2, pp. 164-168

TEXT: The paper is a continuation of previous work of the present author (Ref.7: Izv. AN SSSR, OTN, 1958, No.6; Ref.10: the present journal, 1959, No.5). It is assumed that the shell is thin, that the material is orthotropic and, in the general case, that the elastic constants vary with position. The stress-strain equations and the equation for potential energy are stated, together with the expressions for moments and forces in the shell. The simplified equations corresponding to the momentless case and to the case of pure bending are derived. An estimate is made of the errors in the potential energy expression due to the simplifications, and a comparison is made between the differential equation of bending for inhomogeneous plates and the one applicable to homogeneous plates. The possibility of applying the

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The theory of inhomogeneous anisotropic shells

solutions obtained for homogeneous plates to inhomogeneous plates is pointed out. S.A. Ambartsumyan and L. Librescu are mentioned for their contribution in this field.
There are 1 figure and 10 references: 8 Soviet-bloc and 2 non-Soviet-bloc. The two English language references read as follows:
Ref.4: W.G. Soper. Large deflections of stiffened plates. J. Appl. Mech. 25, 4, Dec. 1958.
Ref.5: W.H. Hoppman. Bending of orthogonally stiffened plates. J. Appl. Mech., 1955, v. 22, p. 267.

SUBMITTED: March 28, 1960

Card 2/2

AKSEL'RAD, E.L. (Leningrad)

Bending of thin-walled bars in case of considerable elastic displacements. Izv.AN SSSR.Otd.tekh.nauk.Mekh.i mashinostr. no.3:124-132 My-Je '61. (MIRA 14:6)

(Elastic rods and wires)

AKSEL'RAD, E.L., kand.tekhn.nauk (Leningrad)

Heavy axisymmetrical flexures of a hollow shell of revolution subjected to heating and loading. Rasch.prostr.konstr. no.6: 275-298 '61. (MIRA 15:3)
(Elastic plates and shells)

AKSEL'RAD, E.L., kand.tekhn.nauk

Design of vibratory feed mechanisms for bunkers. Vest.mash. 41 no.7:16-20 Jl '61. (MIRA 14:6)
(Feed mechanisms)

37143

S/179/62/000/001/013/027
E114/E181

10.6200

AUTHOR: Aksel'rad, E.L. (Leningrad)

TITLE: Bending and loss of stability of thin-walled tubes subjected to hydrostatic pressure

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye tekhnicheskikh nauk. Mekhanika i mashinostroyeniye, no.1, 1962, 98-114

TEXT: When a thin-walled tube bends, its deformed cross-section and the changed curvature lead to a redistribution of stresses and a displacement of the points of application of internal forces. The bending of the tube changes its stiffness. A point can be reached beyond which the tube will continue deflecting without further increase of the bending moment, i.e. the tube loses its stability. The article deals with the non-linear problem of bending of a tube of any cross-section and in particular with a method of stress analysis for tubes used for pressure measurements, which takes into account the non-linearity of deformation and does not require any arbitrary assumptions about the shape of the cross-section or of deformation other than

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Bending and loss of stability of ...

the usual assumptions about thin shells. The general equations are simplified to be applicable only to bars, and are shown to differ from the equations of pure bending by the presence of terms containing functions of the distributed external loads applied to the tube walls and of length. The shape of the cross-section of the rod is expressed as a sine and a cosine pair of functions which are expanded into converging series. If the cross-sectional shape is relatively simple, it is necessary to consider only the first two or three terms in each series. For instance, the greater the ratio of an ellipse the slower is the convergence of the series, and it is shown graphically that, for the ratio of 2.7 it is quite adequate to consider only the first three or even only the first two terms in the series. For sections which are nearly circular, two terms are always adequate. Simplified functions are calculated for the case of a uniform normal pressure; expressions for the slope and the stress function are derived for a case of pure bending with uniform normal pressure. Approximate solutions are obtained by discarding the non-linear terms in computation. Expressions

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subjected to uniform normal pressure is considered, and simplified equations are given for sections which are nearly circular. Deformation under normal uniform pressure is considered for tubes with fixed ends and with one end free, and it is noted that the error introduced by the omission of non-linear terms is small.
There are 5 figures and 2 tables.

SUBMITTED: May 8, 1961

Card 4/4

AKSEL'RAD, E.L., kand.tekhn.nauk (Leningrad); SONIN, E.B., inzh. (Leningrad)

Large axisymmetrical flexures of a plate. Rasch.prostr.konstr. no.7:193-204 '62. (MIRA 15:4)

(Elastic plates and shells)

MOVNIN, M.S., doktor tekhn.nauk, prof.; AKSEL'RAD, E.L., kand.tekhn.nauk

Simple calculation of natural frequencies of bending vibrations of shafts. Vest.mashinostr. 42 no.8:18-22 Ag '62. (MIRA 15:8)
(Shafting—Vibration)

AKSEL'RAD, E.L. (Leningrad)

Calculation of a corrugated diaphragm as a nonshallow shell. Izv.AN SSSR.Mekh. i mashinostr. no.5:67-76 S-O '63. (MIRA 16:12)

AKSEL'RAD, E.L. (Leningrad)

Heavy flexures of a corrugated diaphragm analyzed as a nonshallow shell. Izv.AN SSSR. Mekh.i mashinostr. no.1:46-53 Ja-F '64. (MIRA 17:4)

POSTCARD

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ACCESSION NR: AP4018424 S/0179/64/000/001/0046/0053

AUTHOR: Aksel'rad, E. L. (Leningrad)

TITLE: Large deflections of a corrugated diaphragm considered as a nonshallow shell

SOURCE: AN SSSR. Izv. Otd. tekh. nauk. Mekhanika i mashinostroyeniye, no. 1, 1964, 46-53

TOPIC TAGS: corrugated diaphragm, shell design, diaphragm design, diaphragm deflection

ABSTRACT: The design of concentrically corrugated circular diaphragms is discussed by considering the corrugation wave as a deep shell and taking into account the form and pitch of corrugation and the type of edge clamping. The basic equations describing the deformation of the diaphragm under large deflections are solved by the Bubnov-Galerkin method, and formulas are derived for determining the nonlinear deflection characteristic of a diaphragm with uniform sinusoidal corrugation and a flat center. The design technique for diaphragms having a non-uniform type of corrugation is also mentioned. The results obtained

Card 1/2

AKSEL'RAD, E.L. Leningrad)

Calculating allowable pipeline span according to stability.
Stroi. mekh. i rasch. sooruzh. 5 no.6:37-37 '63
(MIRA 17:7)

AKSEL'RAD, E.L. (Leningrad)

Considering the geometrical nonlinearity for the specification of the upper ultimate load in pipe bending. Izv. AN SSSR.Mekh. no.4:133-139 Jl-Ag '65.
(MIRA 18:12)

MIKHALCHENKOV, M.; BUKREYEV, P.; AKSEL'ROD, A., kand. arkhitektury

Results of the open competition for farmhouse designs. Sel'.stroi. 13 no.2:19-21 F '59. (MIRA 12:3)

1. Direktor instituta "Rosgiprosel'stroy" (for Mikhalchenkov). 2. Nachal'nik tekhnicheskogo otdela instituta "Rosgiprosel'stroy" (for Bukreyev).

(Farmhouses)
(Architecture--Designs and plans--Competitions)

AKSEL'ROD, A.A.

Luminescent analysis in thoracic surgery. Zdravookhranenie 4 no. 2:33-35 My-Ap '61. (MIRA 14:4)

1. Iz kafedry fakul'tetskoy khirurgii (zav. - dotsent N.Kh. Anestiadi) Kishinevskogo meditsinskogo instituta.
(DIAGNOSIS, FLUOROSCOPIC) (CHEST—SURGERY)

AKSEL'ROD, A.A.

Spontaneous rupture of the spleen. Zdravookhranenie 5 no.1:21-24 Ja-F '62. (MIRA 15:4)

1. Iz kafedry fakul'tetskoy khirurgii (zav. dotsent N.Kh.Anestiyadi) Kishinevskogo meditsinskogo instituta.
(SPLEEN--HERNIA)

AKSEL'ROD, A.A.; KALENICH, S.M.

Fibroma of the mesentery of the jejunum. Zdravookhranenie 5 no.1: 60 Ja-F '62. (MIRA 15:4)

1. Iz rayonnoy bol'nitsy p.Rezina (glavnyy vrach N.I.Gromova).
(JEJUNUM--TUMORS)

POZDNYAKOV, K.A., inzhener; AKSEL'ROD, A.I., inzhener; BAKUMENKO, S.P., inzhener.

Setting up the contacts of mercury controllers used in hydraulic accumulators. Vest.mash.36 no.7:58 Jl '56. (MLRA 9:9)
(Electric controllers) (Hydraulic machinery)

AKSEL'ROD, A.M.

USSR/Engineering
Regulators, Speed
Controls, Speed

Mar/Apr 49

"An Escapement Speed-Regulator With Free Anchor Movement," A. M. Aksel'rod, Leningrad Inst of Precision Mech and Opt, 14 pp

"Avtomat i Telemekh" Vol X, No 2

Discusses an escapement speed-regulator, made up of an oscillatory balance-spring system linked with the free anchor movement without any angle of pull. Obtains dependence of the amplitude of oscillation upon the moment applied the movement-

41/49T30

USSR/Engineering (Contd)

Mar/Apr 49

connection, and dependence of the period upon amplitude from calculating the basic parameters of the regulator. Establishes characteristics of the regulator, and determines the regulator's state in terms of the magnitude of the coefficient of nonequilibrium. Proves the regime describing the work of the regulator is stable.

41/49T30

VUL'PE, O.L.; AKSEL'ROD, A.S., inzh.

True road of technological progress. Stroi.mat. 10 no.4:18-19 Ap '64. (MIRA 17:5)

1. Glavnyy inzhener Kazakhskogo instituta Giprostrom (for Vul'pe).

AKSEL'ROD, A.Z., inzh.

Adjustment of a preliminary purification system for preparing and proportioning milk of lime. Energetik 11 no.1:30-31 Ja '63. (MIRA 16:1)

(Boilers—Cleaning) (Feed-water purification)

AKSEL'ROD, A.Z., inzh.

Decrease of oxygen content in turbine condensate. Energetik 12 no.6:13 Je '64. (MIRA 17:9)

AKSEL'ROD, D. G.

AKSEL'ROD, D.G.

Communications workers of the Ukraine share their experience with those of Kazakhstan. Vest.sviazi 16 no.10:26 O '56. (MIRA 10:10)

1. Starshiy inzhener otdela truda i zarabotnoy platy Ministerstva svyazi USSR.

(Ukraine--Telecommunication)

AKSEL'ROD, D.G.

Public inspection of the organization of work norms and wages.
Vest.sviazi 16 no.11:26 N '56. (MLRA 10:1)

1. Starshiy inzhener otdela truda i zarabotnoy platy Ministerstva svyazi USSR.
(Ukraine--Telecommunication)

AKSEL'ROD, D.G.

Competition for the title of brigade of communist labor. Vest. sviazi 19 no.7:21-22 Jl '60. (MIRA 13:8)

1. Starshiy inzhener otdela truda i zarabotnoy platy Ministerstva svyazi USSR.

(Telecommunication)

AKSEL'ROD, D.G.

Dessemination of advanced experience in interurban telephone offices. Vest. sviazi 17 no.7:28-29 Jl '57. (MLRA 10:8)

1. Starshiy inzhener Otdela truda i zarabotnoy platy Ministerstva svyazi USSR.

(Telephone)

GOLOVCHENKO, I.A.; AKSEL'ROD, D.G., inzh.

Publicize the latest practices of telephone workers. Vest. sviazi 19 no.11:22 N '59. (MIRA 13:8)

1. Zamestitel' nachal'nika upravleniya elektrosvyazi i radiofikatsii Ministerstva svyazi USSR (for Golovchenko).
(Telephone--Employees)

AKSEL'ROD, D. M. (DECEASED) 1963/2

MEDICINAL PLANTS c' 1961

see ILC

BERNSHTEYN, S.A.; AKSEL'ROD, D.S.; SAVVINA, M.D.; SLAVUTSKIY, S.M., otv. red.; KRASOVSKIY, I.P., red. izd-va

[New, more waterproof types of concrete with lower consumption of slag portland cement]Novye vidy betonov povyshennoi vodonepronitsaemosti s ponizhennym raskhodom shlakoportland-tsementa; informatsionnoe soobshchenie. Moskva, Gosgortekhizdat, 1962. 7 p. (MIRA 16:3)

(Concrete)

AKSEL'ROD, G. I., Engineer.

"Investigation of the Combustion of Rich Mixtures in Engines." Sub 27 Sep 51, Moscow Automobile and Road Inst imeni V. M. Molotov.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

AKSEL'ROD, [illegible].I.

Results of testing and adjusting Diesel engine 4 Ch $\frac{42.5}{60}$. Energ.biul. no.8:12-15 Ag '53. (MLRA 6:8)
(Diesel motor)

AKSEL'ROD, E.I.

AID P - 803

Subject : USSR/Engineering

Card 1/1 Pub. 28 - 2/7

Author : Aksel'rod, E. I.

Title : Results of factory test of the 1D $\frac{26}{30}$ engine

Periodical : Energ. byul., #8, 5-8, Ag 1954

Abstract : Factory test of a 45-hp one-cylinder two-cycle diesel engine (200 mm dia x 300 mm stroke) is described. The data for test condition and the results of the test are given in one table and 5 charts.

Institution : None

Submitted : No date

AKSEL'ROD, E.I.

Regulating and testing a DR(4ch 42.5/60) engine. Energ.biul. no.11: 9-13 N '54. (MLRA 7:11)
(Gas and oil engines--Testing)

18(7)
AUTHOR: Aksel'rad, E.I., Assistant

SOV/146-58-4-17/22

TITLE: The Deformation of a Cantilever Bimetallic Plate During Heating

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Priborostroyeniye, 1958, Nr 4, pp 108-116 (USSR)

ABSTRACT: Bimetallic plates manufactured according to the diagrams shown in Figure 1 and Figure 2, find widespread application as thermo-elements in instruments. The formula for the calculation of the deformation of bimetallic strips [Ref 1] may provide essential errors according to [Ref 2]. Using the method of L.V. Kantorovich [Ref 5], the author presents a calculation method which makes the aforementioned formula more accurate. He compares experimental data with calculated values and shows that the calculation of the bending and angle of rotation of a bimetallic plate, as shown in Figure 1, deviate in the first and second approximation by less than 3%.

Card 1/2

AKSEL'ROD, E.I., dotsent; SHPAKHLER, A.G., starshiy prepaodavatel'

Briequetting coal and anthracite mixtures treated with fuel gases. Izv.vys.ucheb.zav.; gor.zhur. 5 no.9:165-168 '62. (MIRA 15:11)

1. Dnepropetrovskiy ordena Trudovogo Krasnogo Znameni gornyy institut imeni Artema. Rekomendovana kafedroy obogashcheniya poleznykh iskopayemykh.
(Briquets (Fuel))

SHPAKHLER, A.G.; AKSEL'ROD, E.I.; KOTKIN, A.M.; SOLOV'YEV, A.V.; ZEL'DIN, B.B.

Improving the manufacture technology in coal briquet plants.
Ugol' Ukr. 6 no.2:17-19 F '62. (MIRA 15:2)

1. Dnepropetrovskiy gornyy institut (for Shpakhler, Aksel'rod).
2. UkrNIIUgleobogashcheniye (for Kotkin, Solov'yev). 3.
Donetskgiproshakht (for Zel'din).
(Briquets (Fuel))

L 39118-66 EWP(k)/EWT(d)/EWT(m)/EWP(w)/EWF(v) IJP(c) EM/WW

ACC NR: AP6030356 SOURCE CODE: UR/0424/66/000/002/0077/0083

25
B

AUTHOR: Aksel'rad, E. L. (Leningrad)

ORG: none

TITLE: Periodic solution of axisymmetrical problem in the theory of shells

76

SOURCE: Inzhenernyy zhurnal. Mekhanika tverdogo tela, no. 2, 1966, 77-83

TOPIC TAGS: shell theory, axisymmetrical body

ABSTRACT: An analysis is made of periodic solution of the equations for large displacements of rotation shells and the bending of thin-walled working shafts. The Meissner functions are found in the form of trigonometric series; nonlinearity is taken into consideration by expansion by powers of parameters of change in curvature of the rod and load. The solution produced is developed in detail for bellows. Orig. art. has: 4 figures, 9 formulas and 1 table. [JPRS: 36,581]

SUB CODE: 22 / SUBM DATE: 07Jul65 / ORIG REF: 008

ns

Card 1/1

L 00765-67 EWP(k)/EWT(d)/EWT(m)/EWP(w)/EWP(v) IJP(c) EM/WW

ACC NR: AT6022503 SOURCE CODE: UR/2779/65/000/010/0101/0118

AUTHOR: Aksel'rad, E. L. (Candidate of technical sciences; Leningrad)

ORG: None

42

B+1

TITLE: Stability of a closed circular cylindrical shell under bending

SOURCE: Raschet prostranstvennykh konstruktsiy; sbornik statey. no. 10, 1965, 101-118

TOPIC TAGS: shell theory, cylindric shell structure, shell structure stability, pipeline, BENDING STRESS

ABSTRACT: The author considers a closed cylindrical shell and derives formulas for determining the critical load which results in dents on the distorted and flattened surface of a thin-walled tube subjected to bending moments at the ends. The critical stress is calculated with regard to the increase in the radius of curvature of the wall in the zone of stability loss during subcritical bending. The limiting case of a cylinder which is so long that fastening of the ends has little effect on the subcritical deformation is considered as well as the case of a cylinder which is so short that deformation of the cross section before loss of stability may be disregarded. The effect of initial irregularities in shape (dents) on the stability of a tube during bending is considered assuming that the pipe is extremely long. A formula is derived for determining the maximum span of an underground pipeline between supports with respect to stability conditions. Orig. art. has: 8 figures, 67 formulas.

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 017/ OTH REF: 004

ns

Card 1/1

SOV/135-58-12-12/20

AUTHORS: Aksel'rod, F.A., Zaytsev, M.P., Engineers

TITLE: A Seam Welding Machine for Welding Stainless Steel Parts of Different Thickness (Shovnaya mashina dlya svarki detaley raznoy tolshchiny iz nerzhaveyushchey stali)

PERIODICAL: Svarochnoye proizvodstvo, 1958, Nr 12, pp 33-35 (USSR)

ABSTRACT: Detailed information is presented on a machine designed by VNIIESO for welding annular hermetic seams in stainless steel parts of different thickness, with 0.01 sec. pulse duration. The parts to be welded are compressed by special devices fixed in a drum-type driving head. The driving head rotates in a rigid bearing and is actuated by worm gears from a "BP-1" type driving gear (designed by Engineer B.I. Nikonov). The machine is equipped with a synchronous ignitron breaker ensuring stable and high-quality weld joints.
There is 1 photo, 2 diagrams, 1 circuit diagram and 1 oscillogram.

ASSOCIATION: VNIIESO

Card 1/1

AKSEL'ROD, F.A.

Machine for contact seam-welding of parts with variable thickness.
Biul.tekh.-ekon.inform. no.2:26-28 '59. (MIRA 12:3)
(Electric welding)

AKSEL'ROD, Feliks Aronovich; GUL'DENBAL'K, Aleksey Pavlovich; ZAYTSEV, Mikhail Pavlovich; YURINOV, V.M., nauchnyy red.; BONDAROVSKAYA, G.V., red.; PERSON, M.N., tekhn. red.

[Fundamentals of electrical engineering and electronics; a manual for electric welders] Osnovy elektrotekhniki i elektoniki; dlia elektrosvarshchikov. Moskva, Vses. uchebno-pedagog. izd-vo Proftekhizdat, 1961. 183 p. (MIRA 15:2)
(Electric engineering) (Electronics)
(Electric welding--Handbooks, manuals, etc.)

AKSEL'ROD, F.A., inzh.; ZAYTSEV, M.P., kand. tekhn. nauk; ZLOBIN, G.I., inzh.; KOCHERGIN, K.A., kand. tekhn. nauk; NEKRASOV, B.M., inzh.; SLIOZBERG, S.K., nauchnyy red.; DONSKOY, A.V., nauchnyy red.; DEMYANTSEVICH, V.P., nauchnyy red.; SARAFANOV, S.G., nauchnyy red.; BONDAROVSKAYA, G.V., red.; DORODNOVA, L.A., tekhn. red.; PERSON, M.N., tekhn. red.

[Resistance welding]Kontaktnaia svarka. [By] F.A.Aksel'rod i dr. Moskva, Proftekhizdat, 1962. 463 p. (MIRA 15:12)
(Electric welding)

AKSEL'ROD, F.M.

Determination of free hydrochloric acid in the presence of organic acids and chlorides. Vop. pit. 21 no.6:84-85 N-D '62. (MIRA 17:5)

1. Iz laboratorii neorganicheskoy i analiticheskoy khimii (zav. - dotsent B.I. Leonov) Kishinevskogo meditsinskogo instituta.

AKSEL'ROD, G., laureat Stalinskoy premii.

Two-sided stamping. Izobr. i rats. no. 5:50-51 My '61.
(MIRA 14:5)
(Sheet-metalwork)

MANUYLOV, K.N.; AKSEL'ROD, G.S.; SHESTOPALOV, L.A.

Clock mechanisms for hydrometeorological instruments. Trudy NIIGMP no.8:90-98 '59. (MIRA 13:4)
(Meteorological instruments) (Clocks and watches)

AKSEL'ROD, I., kand. tekhn. nauk; MOSHCHEVITIN, G., inzh.

Efficient methods for earthwork operations to be carried out under winter conditions. Na stroi. Mosk. 2 no.9:4-5 S '59. (MIRA 13:2)
(Earthwork--Cold weather conditions)

AKSEL'ROD, I.I., inzh.

Distribution air conduit designed by K.K.Baulin. Vod. i san. tekh. no.1:33 Ja '65. (MIRA 18:3)